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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
MITSUHIRO MIYAZAKI, ET AL. : EXAMINER: CHOE, Y.  
SERIAL NO: 10/538,658 :  
FILED: JUNE 10, 2005 : GROUP ART UNIT: 2185  
FOR: INFORMATION PROCESSING :  
DEVICE AND METHOD, RECORDING  
MEDIUM, AND PROGRAM

RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This Response to Notification of Non-Compliant Appeal Brief is in response to the Notification of Non-Compliant Appeal Brief dated July 23, 2009. This is an appeal from the decision of the Examiner dated April 30, 2009 which finally rejected Claims 1-14, 16, and 17 in the above-identified patent application. A Notice of Appeal was filed on June 23, 2009.

I. REAL PARTY-IN-INTEREST

The real party-in-interest is Sony Corporation.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative, and the assignees are aware of no appeals which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

### III. STATUS OF CLAIMS

Claims 1-14, 16, and 17 have been finally rejected and form the basis for this appeal. Claim 15 is canceled. Appendix VIII includes a clean copy of Claims 1-14, 16, and 17. The rejections of Claims 1-14, 16, and 17 are being appealed.

### IV. STATUS OF AMENDMENTS

No amendment after final rejection has been filed.

### V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 is directed to an information processing apparatus including grouping means, calculating means, generating means, and recommending means. The grouping means is for organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute (CPU 11, Figure 7, paragraphs 90-91 of the publication of the specification). The calculating means is for calculating frequency of uses of the contents with respect to each of the group IDs (CPU 11, Figure 7, paragraphs 90-92 of the publication of the specification). The generating means is for generating user preference information indicating preferences of a user based on the use frequency calculated by the calculating means (CPU 11, Figure 7, paragraph 95 of the publication of the specification). The generating means generates user preference information based on a normalized use frequency for each group (CPU 11, Figure 7, paragraphs 80-82 of the publication of the specification). The normalized use frequency normalized is based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history (CPU 11, Figure 7, paragraph 80 of the publication of the specification). The

recommending means is for giving content recommendations based on the user preference information generated by the generating means (CPU 11, Figure 7, paragraph 97 of the publication of the specification).

Independent Claim 13 is directed to an information processing method including: organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute (step S5, Figure 9, paragraph 90 of the publication of the specification); calculating frequency of uses of the contents with respect to each of the group IDs (step S6, Figure 9, paragraphs 91-92 of the publication of the specification); generating user preference information indicating preferences of a user based on the use frequency calculated in the calculating (step S23, Figure 15, paragraphs 95-96 of the publication of the specification); and giving content recommendations based on the user preference information generated in the generating (step S24, Figure 15, paragraph 97 of the publication of the specification). The generating includes generating user preference information based on a normalized use frequency for each group (paragraphs 80-82 of the publication of the specification). The normalized use frequency is normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history (paragraph 80 of the publication of the specification).

Independent Claim 14 is directed to a computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method. The method includes organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute (step S5, Figure

9, paragraph 90 of the publication of the specification); calculating frequency of uses of the contents with respect to each of the group IDs (step S6, Figure 9, paragraphs 91-92 of the publication of the specification); generating user preference information indicating preferences of a user based on the use frequency calculated in the calculating (step S23, Figure 15, paragraphs 95-96 of the publication of the specification); and giving content recommendations based on the user preference information generated in the generating (step S24, Figure 15, paragraph 97 of the publication of the specification). The generating includes generating user preference information based on a normalized use frequency for each group (paragraphs 80-82 of the publication of the specification). The normalized use frequency is normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history (paragraph 80 of the publication of the specification).

Independent Claim 17 is directed to an information processing apparatus including a grouping unit, a calculating unit, a preference generating unit, and a recommending unit. The grouping unit is configured to organize delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute (CPU 11, Figure 7, paragraphs 90-91 of the publication of the specification). The calculating unit is configured to calculate frequency of uses of the contents with respect to each of the group IDs (CPU 11, Figure 7, paragraphs 90-92 of the publication of the specification). The preference generating unit is configured to generate user preference information indicating preferences of a user based on the use frequency calculated by the calculating unit (CPU 11, Figure 7, paragraph 95 of the publication of the specification). The preference generating unit is configured to generate user preference information based on a normalized use frequency for each group (CPU 11,

Figure 7, paragraphs 80-82 of the publication of the specification). The normalized use frequency is normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history (CPU 11, Figure 7, paragraph 80 of the publication of the specification). The recommending unit is configured to give content recommendations based on the user preference information generated by the preference generating unit (CPU 11, Figure 7, paragraph 97 of the publication of the specification).

## VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are

(a) whether Claims 1-3, 13, 14, 16, and 17 are patentable under 35 U.S.C. §103(a) over Saito et al. (U.S. Patent Application Publication No. 20010018685, hereinafter “Saito”) in view of Hane et al. (U.S. Patent Application Publication No. 20020157096, hereinafter “Hane”) and further in view of Miller et al. (U.S. Patent Application Publication No. 20050185055, hereinafter “Miller”); and

(b) whether Claims 4-12 are unpatentable under 35 U.S.C. §103(a) over Saito in view of Hane and further in view of Miller and Platt (U.S. Patent No. 6,987,221).

## VII. ARGUMENTS

A. Claims 1-3, 13, 14, 16, and 17 are patentable over Saito in view of Hane and further in view of Miller

Claim 1 recites in part:

generating means for generating user preference information indicating preferences of a user based on the use frequency calculated by said calculating means, said generating means generating user preference information based on a ***normalized*** use frequency for each group, ***said normalized use frequency normalized based on use frequencies of all***

***contents in each respective group delivered during a time period corresponding to a use history.***

The outstanding Office Action conceded that Saito and Hane do not teach generating user preference information based on a normalized use frequency, and cited Miller as describing this feature.<sup>1</sup> In particular, the outstanding Office Action cites paragraphs 37 of Miller, which describes that a preferred contrast setting is set to the value most often selected by the user. In contrast, the claimed invention recites generating means generating user preference information based on a ***normalized*** use frequency. As described in the present specification at paragraphs 80 and 81 of the publication, attempting to use a simple use frequency may not accurately reflect a user's preferences due to disproportionate content selection. Accordingly, to make sure the generated preference information is always reflective of the user's preferences, normalized use frequencies are used in the claimed invention. In particular, Figures 11A and 11B of the present application provide an example of the difference between a use frequency and a ***normalized*** use frequency.

Not only does Miller fail to describe the use of ***normalized*** use frequencies, Miller explicitly describes using the simple use frequency. Accordingly, not only does Miller fail to teach or suggest the above highlighted feature of the claimed invention, Miller explicitly teaches to the contrary. For example, if the digital camera of Miller is used in very dark settings for the first few scenes, an extreme contrast level will be chosen for this very dark setting. When the user changes to a lighter setting, the extreme contrast level for the dark setting will be considered the “preferred” due to lack of normalization of the use frequency. Therefore, Miller does not teach or suggest a ***normalized*** use frequency for each group ***based on use frequencies of all contents*** in each respective group ***delivered during a time period corresponding to a use history.***

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<sup>1</sup>See the outstanding Office Action at pages 4-5 and 14-15.

Accordingly, it is respectfully submitted that the proposed combination of Saito, Hane, and Miller does not teach or suggest “generating means” as defined in Claim 1. Consequently, Claim 1 (and Claims 2-12 and 16 dependent therefrom) is patentable over Saito in view of Hane and further in view of Miller.

Claims 13 and 14 recite in part:

generating user preference information indicating preferences of a user based on the use frequency calculated in said calculating, said generating including generating user preference information based on a ***normalized use frequency*** for each group, said ***normalized use frequency normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history***.

As noted above, Miller fails to describe generating user preference information based on ***normalized*** use frequencies, and in fact explicitly describes using a simple use frequency. Accordingly, not only does Miller fail to teach or suggest the above highlighted feature of the claimed invention, Miller explicitly teaches to the contrary. Thus, it is respectfully submitted that the proposed combination of Saito, Hane, and Miller does not teach or suggest “generating user preferences” as defined in Claims 13 and 14. Consequently, Claims 13 and 14 are also patentable over Saito in view of Hane and further in view of Miller.

Claim 17 recites in part:

a preference generating unit configured to generate user preference information indicating preferences of a user based on the use frequency calculated by said calculating unit, said preference generating unit configured to generate user preference information based on a normalized use frequency ***for each group***, said normalized use frequency normalized based on use frequencies of all contents ***in each respective group*** delivered during a time period corresponding to a use history.

As noted above, Miller fails to describe a device that generates user preference information based on ***normalized*** use frequencies, and in fact the device described by Miller only using a simple use frequency. Accordingly, not only does Miller fail to teach or suggest

the above highlighted feature of the claimed invention, Miller explicitly teaches to the contrary. Thus, the proposed combination of Saito in view of Hane and further in view of Miller does not teach or suggest “a preference generating unit” as defined in Claim 17. Consequently, Claim 17 is also patentable over Saito in view of Hane and further in view of Miller.

B. Claims 4-12 are patentable over Saito in view of Hane and Miller and further in view of Platt

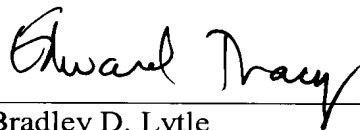
With regard to the rejection of Claims 4-12 as unpatentable over Saito in view of Hane and Miller and further in view of Platt, it is noted that Claims 4-12 are dependent from Claim 1, and thus are believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Platt does not cure any of the above-noted deficiencies of Saito, Hane, and Miller. Accordingly, it is respectfully submitted that Claims 4-12 are patentable over Saito in view of Hane and Miller and further in view of Platt.

Conclusion

It is respectfully requested that the outstanding rejection be REVERSED.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

Claim 1: An information processing apparatus comprising:

grouping means for organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute;

calculating means for calculating frequency of uses of the contents with respect to each of the group IDs;

generating means for generating user preference information indicating preferences of a user based on the use frequency calculated by said calculating means, said generating means generating user preference information based on a normalized use frequency for each group, said normalized use frequency normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history; and

recommending means for giving content recommendations based on said user preference information generated by said generating means.

Claim 2: The information processing apparatus according to claim 1, wherein the grouping attribute constituted by an attribute item indicating a broadcast time slot and by at least one other attribute item is established for said information processing apparatus; and wherein said grouping means organizes said delivered contents into groups by the established grouping attribute.

Claim 3: The information processing apparatus according to claim 1, wherein the grouping item constituted by at least an attribute item indicating a broadcast time slot and the grouping item formed by other attribute items are established for said information processing

apparatus; and wherein said grouping means organizes said delivered contents into groups by each of the established grouping items.

Claim 4: The information processing apparatus according to claim 1, wherein said grouping means morphologically analyzes constituent items making up said attribute item of said contents, and determines degrees of similarity between constituent items making up said grouping item based on results of the analysis.

Claim 5: The information processing apparatus according to claim 1, wherein said generating means does not utilize the use frequency of the group constituted by the contents failing to meet a predetermined condition when generating said user preference information.

Claim 6: The information processing apparatus according to claim 1, wherein said recommending means comprises:

determining means for determining whether or not said use frequency calculated by said calculating means is higher than a predetermined set value; and

setting means for setting a staple flag indicating that the recommended contents have been viewed frequently to said content recommendation information if said use frequency is found higher than said predetermined set value by said determining means.

Claim 7: The information processing apparatus according to claim 1, wherein said generating means comprises extracting means for acquiring metadata about the contents constituting the groups of which said use frequency calculated by said calculating means is higher than a predetermined set value, said extracting means further extracting vectors representing an amount of characteristics of said metadata; and wherein said generating

means generates said user preference information based on said vectors extracted by said extracting means.

Claim 8: The information processing apparatus according to claim 7, wherein said generating means comprises staple determining means for determining whether or not the contents constituting the groups of which said use frequency is found higher than said predetermined set value correspond to said content recommendation information to which is set a staple flag indicating that the recommended contents have been viewed frequently; and wherein, if said staple determining means determines that said contents do not correspond to said content recommendation information carrying the set staple flag, then said extracting means acquires the metadata about said contents and extracts vectors representing an amount of characteristics of said metadata.

Claim 9: The information processing apparatus according to claim 7, wherein said user preference information is constituted by a plurality of attributes and by values representing degrees of importance of said attributes.

Claim 10: The information processing apparatus according to claim 7, wherein said generating means comprises familiarity setting means for setting degrees of familiarity with said contents based on the use frequency calculated by said calculating means; and wherein said generating means assigns weights to degrees of importance of said user preference information based on said degrees of familiarity.

Claim 11: The information processing apparatus according to claim 7, wherein said generating means comprises:

searching means for searching for contents of which said use frequency is lower than a predetermined value on the basis of a history of uses of said contents; and special preference information generating means for generating special preference information based on metadata about the contents retrieved by said searching means.

Claim 12: The information processing apparatus according to claim 11, further comprising:

first extracting means for extracting vectors representing an amount of characteristics of either said user preference information or said special preference information;

second extracting means for acquiring metadata about the contents broadcast in a predetermined set time slot, and extracting vectors representing an amount of characteristics of said meta; and

calculating means for calculating degrees of similarity between the vectors extracted by said first extracting means and those extracted by said second extracting means;

wherein said recommending means selects a predetermined set number of the vectors extracted by said second extracting means, said vectors being selected in descending order of said degrees of similarity, said recommending means further giving content recommendations based on the metadata about the selected vectors.

Claim 13: An information processing method comprising:

organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute;

calculating frequency of uses of the contents with respect to each of the group IDs;

generating user preference information indicating preferences of a user based on the use frequency calculated in said calculating, said generating including generating user preference information based on a normalized use frequency for each group, said normalized use frequency normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history; and

giving content recommendations based on said user preference information generated in said generating.

Claim 14: A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method comprising:

organizing delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute;

calculating frequency of uses of the contents with respect to each of the group IDs;

generating user preference information indicating preferences of a user based on the use frequency calculated in said calculating, said generating including generating user preference information based on a normalized use frequency for each group, said normalized use frequency normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history; and

giving content recommendations based on said user preference information generated in said generating.

Claim 15 (Canceled).

Claim 16: The information processing apparatus according to claim 1, wherein said recommending means recommends content for which the normalized use frequency exceeds a preference threshold.

Claim 17: An information processing apparatus comprising:

a grouping unit configured to organize delivered contents into groups each constituted by the contents which are given the same group identification (ID) for having degrees of similarity higher than a predetermined value regarding a grouping item including at least one attribute item representative of a content attribute;

a calculating unit configured to calculate frequency of uses of the contents with respect to each of the group IDs;

a preference generating unit configured to generate user preference information indicating preferences of a user based on the use frequency calculated by said calculating unit, said preference generating unit configured to generate user preference information based on a normalized use frequency for each group, said normalized use frequency normalized based on use frequencies of all contents in each respective group delivered during a time period corresponding to a use history; and

a recommending unit configured to give content recommendations based on said user preference information generated by said preference generating unit.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.